*Attachment No. 2 to Rector’s ordinance No. 90 /2018*

**description of the course of study**

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| **Course code** | **0912-7LEK-B2.6-P** |
| **Name of the course in**  | Polish | **Patologia** |
| English | **Pathology** |

1. **LOCATION OF THE course OF STUDY within the system of studies**

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| **1.1. Field of study** | Medicine |
| **1.2. Mode of study** | Full-time |
| **1.3. Level of study** | Uniform Master’s studies |
| **1.4. Profile of study\*** | General academic  |
| **1.5. Person preparing the course description** | Associate Prof. Piotr Lewitowicz MD, PhD |
| **1.6. Contact** | plewitowicz@ujk,edu.pl |

1. **General characteristicS of the course of study**

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| **2.1. Language of instruction** | English |
| **2.2. Prerequisites\*** | Anatomy, histology, physiology, pathophysiology |

1. **DETAILED CHARACTERISTICS OF THE COURSE OF STUDY**

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| * 1. **Form of classes**
 | Lectures: 50, classes: 100,  |
| * 1. **Place of classes**
 | Lecture Halls at UJKDidactic rooms at UJKAutopsy room |
| * 1. **Form of assessment**
 | Partial theoretical and practical tests ( web based PathXL test)Final theoretical and practical exam (web based PathXL test) |
| * 1. **Teaching methods**
 | Lecture – lecture with multimedia presentationClass - discussion about current topic, working with digital pictures – macroscopic and microscopic pictures and slides. Discuss about predicting and prognostic factors. e-learningAutopsy – active participation in the autopsy , discussion about a case |
| * 1. **Bibliography**
 |  **Required reading** | 1. V. Kumar, A. K. Abbas, J. C. Aster. Robbins and Cotran Pathologic Basis of Disease. IXth Edition, 2015, Elsevier. 2. V. Kumar, A. K. Abbas, J. C. Aster. Robbins Basic Pathology. IX Edition, 2013, Elsevier. |
|  **Further reading** | 1. E. C. Klatt. Robbins and Cotran Atlas of Pathology, 3th Edition, 2015, Elsevier.  |

1. **Objectives, syllabus CONTENT and intended LEARNING outcomes**

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| * 1. **Course objectives *(including form of classes)***

**Lecture**C1 - The aim of the subject is to present the issues of general human pathology with particular regard to adaptation processes, inflammations, circulatory disorders, tumors.C2 - The aim is to know the pathogenesis of non-cancerous diseases and cancers.C3 - The goal is to get familiar with pathological methods as well knowing their limitations.C4 - The role of strict cooperation clinicians with pathologists.C5 - The goal is to know the relationship between the patient, the clinician and the pathomorphologist.ClassesC1 - The aim of the exercises is to continue the issues presented during the lectures with a special emphasis on understanding the cause-effect sequence of organ diseasesC2 – The goal is to get to know the detailed pathology of the organsC3 – The goal is to know the morphology of organsC4 – The aim is to know the morphological exponent of non-cancerous diseases and cancers |
| * 1. **Detailed syllabus *(including form of classes)***

***Lectures,*** ***Classes -*** The table of content**WINTER SEMESTER*** 1. **Lecture 1** – welcoming lecture and main topic: cellular responses, injury, adaptation and death – 4h
	2. **Lecture 2** – Inflammation and wound healing – 4h
	3. Class 1 – inflammation 4h
	4. Class 2 – hemodynamic disorder, thromboembolic disease and shock – 4h –
	5. **Lecture 3** – genetic disorders -4h
	6. Class 3 – diseases of immune system – 4h
	7. **Lecture 4** – neoplasia – 4h
	8. **Lecture 5** – neoplasia part II – 4h
	9. Class 4 – infectious disease – 4h
	10. Class 5 – blood vessels – 4h
	11. **Class 6– 1-st test classes 1-5 – 2h**
	12. Class 7 - CNS – 4h and 1h e-learning
	13. **Lecture 6** – environmental and nutritional disease – 3h
	14. Class 8– disease of infancy and childhood – 4h
	15. Class 9 – diseases of lymph nodes, white blood cells, spleen and thymus – 4h
	16. Class 10 – autopsy 3h
	17. Class 11 – the heart – 4h
	18. Class 12 – diseases of red blood cells and bleeding disorders– 4h – e-learning
	19. Class 13 –classes 6-14 review and summary 2h
	20. **Class 14- 2-nd test classes 6-13 – 2h**
	21. **Lecture 7 – test - first semester lectures content – 2h**

**SUMMER SEMESTER** * 1. Class 15– respiratory system – 4h
	2. Class 16 – head and neck diseases and upper GI -4h
	3. **Lecture 8** – GI pathology – 4h
	4. Class 17 - GI pathology (intestines pathology) – 4h
	5. Class 18 – liver and biliary tree and pancreas – 4h
	6. **Lecture 9** – Liver and biliary tree – 4h
	7. Class 19 – kidney 4h
	8. Class 20 – autopsy 2h
	9. **Class 21 – 3-rd test , classes 15-19 – 2h**
	10. Class 22– Urinary tract and male genital system – 4h
	11. **Lecture 10** – Female genital system – 4h
	12. Class 23 - female genital system – 4h
	13. Class 24 – the breast – 3h
	14. **Lecture 11** – endocrine system – 4h
	15. Class 25 – endocrine system – 4h
	16. Class 26 – the skin – 4h
	17. **Lecture 12** – soft tissue tumors – 4h
	18. **Lecture 13- bone and joints pathology 3h**
	19. **Class 27** muscle, peripheral nerves and bone pathology – e-learning 5h
	20. **Class 28 – 4-th test classes 22-27 - 2h**
	21. **Lecture14 – 2-nd semester lectures test – 2h**
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**4.3 Intended learning outcomes**

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| **Code** | **A student, who passed the course** | **Relation to learning outcomes** |
| within the scope of **knowledge**  the graduate knows and understands**:** |
| W01 | the terminology used in anatomic pathology; | C.W26. |
| W02 | basic mechanisms of tissue and cell damage | C.W27. |
| W03 | determines the clinical course specific and non-specific inflammations and describes the regeneration of tissues and organs; | C.W28. |
| W04 | the definition and pathophysiology of shock, with particular emphasis on the differentiation of shock and multiple organ failure’s causes; | C.W29. |
| W05 | the etiology of hemodynamic disturbances, retrogressive and progressive changes; | C.W30. |
| W06 | the problems concerning specific organ pathology, macroscopic and microscopic images and the clinical course of pathological changes in various organs; | C.W31. |
| W07 | the consequences of developing pathological changes for topographically adjacent organs; | C.W32. |
| W08 | internal and external pathogens, both modifiable and non-modifiable; | C.W33. |
| W09 | clinical forms of most common diseases of various systems and organs, metabolic diseases and disorders of water-electrolyte balance and acid-base balance; | C.W34. |
| within the scope of **ABILITIES** the graduate knows how to**:** |
| U01 | operate the optical microscope, also making use of immersion; | A.U1. |
| U02 | recognize histological structures of organs, tissues, cells and cellular structures on the optical or histological microscope images, makes descriptions and interprets the structure and relations between the structure and the function; | A.U2. |
| U03 | understand the relation between images of tissue and organ damage and clinical symptoms of the disease, medical history and the results of laboratory determinations; | C.U11. |

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| * 1. **Methods of assessment of the intended learning outcomes**
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| **Teaching** **outcomes*****(code)*** | **Method of assessment (+/-)** |
| **Exam oral/written\*** | **Test\*** | **Project\*** | **Effort** **in class\*** | **Self-study\*** | **Group work\***  | **Others\*** |
| ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** |
| *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* |
| W01 | ***+*** |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |  |  |  |
| W02 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |  |  |  |
| W03 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |  |  |  |
| W04 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W05 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W06 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W07 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W08 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W09 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| U01 |  |  |  |  | ***+*** |  |  |  |  | ***+*** |  |  |  |  |  |  | ***+*** |  |  | ***+*** |  |
| U02 |  |  |  |  | ***+*** |  |  |  |  | ***+*** |  |  |  |  |  |  | ***+*** |  |  | ***+*** |  |
| U03 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  | ***+*** |  |

***\*delete as appropriate***

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| * 1. **Criteria of assessment of the intended learning outcomes**
 |
| **Form of classes** | **Grade** | **Criterion of assessment** |
|  **lecture (L)** | **3** | 61-68% The result of the practical and theoretical tests  |
| **3,5** | 69%-76% The result of the practical and theoretical tests |
| **4** | 77%-84% The result of the practical and theoretical tests |
| **4,5** | 85%-92% The result of the practical and theoretical tests |
| **5** | 93%-100% The result of the practical and theoretical tests |
| **classes (C)\*** | **3** | 61-68% The result of the practical and theoretical tests  |
| **3,5** | 69%-76% The result of the practical and theoretical tests |
| **4** | 77%-84% The result of the practical and theoretical tests |
| **4,5** | 85%-92% The result of the practical and theoretical tests |
| **5** | 93%-100% The result of the practical and theoretical tests |

1. **BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT**

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| **Category** | **Student's workload** |
| **Full-time****studies** |
| *NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/* | **150** |
| *Participation in lectures\** | **50** |
| *Participation in classes, seminars, laboratories\** | **100** |
| *Preparation in the exam/ final test\** |  |
| *Others\** |  |
| *INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/* | **175** |
| *Preparation for the lecture\** | **95** |
| *Preparation for the classes, seminars, laboratories\** | **70** |
| *Preparation for the exam/test\** | **10** |
| *Gathering materials for the project/Internet query\** |  |
| *Preparation of multimedia presentation* |  |
| *Others (please specify e.g. e-learning)\** |  |
| *TOTAL NUMBER OF HOURS* | **325** |
| ECTS credits for the course of study | **13** |

***\*delete as appropriate***

***Accepted for execution*** *(date and legible signatures of the teachers running the course in the given academic year)*

*18.07.2020. Associate Prof. Piotr Lewitowicz MD, PhD*